MANUFACTURER / MERCHANT SERVICE AFFILIATIONS

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MANUFACTURER/MERCHANT SERVICE AFFILIATIONS

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1 INTRODUCTION

I INTRODUCTION

A. OBJECTIVES

- This study, prepared by INPUT for AT&T, examines service support practices, issues, and trends in the telecommunications, and small information systems markets.

- The objectives of this study, as shown in Exhibit I-1, are to:

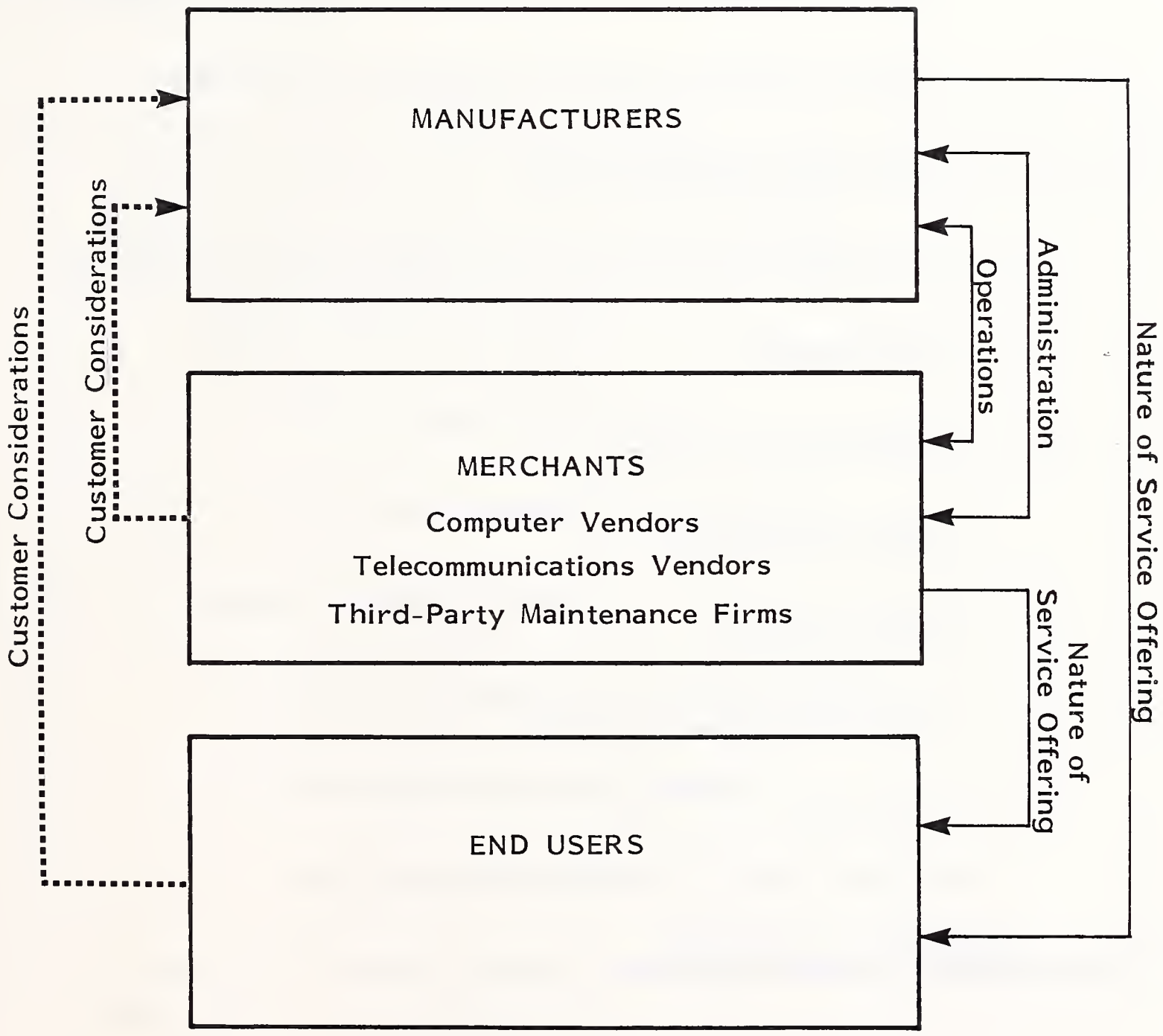
  - Focus on the relationships between manufacturers and merchants with respect to administrative and operational aspects of warranty and post-warranty service.

  - Examine the nature of the service offerings from the manufacturer and the merchant to the end user, including the characteristics of remote area service, internal and external influences, and third-party maintenance activity.

  - Determine customer considerations as viewed by the manufacturer and the merchant.

EXHIBIT I-1

INTERRELATIONSHIP OF
OBJECTIVES UNDER REVIEW



B. SCOPE

- Sources of information for the study include:
  - Manufacturers.
  - Telecommunications dealers, distributors, contractors, and agents.
  - Computer dealers, distributors, contractors, and franchises.
  - Third-party maintenance firms.
- Types of equipment being serviced by respondents include the following:
  - Minicomputers.
  - Small business computers.
  - Personal computers.
  - Word processors.
  - PBX/CBX switches and stations.
  - Terminals.

C. LOGISTICAL BOUNDARIES

- The study was restricted to the U.S.

- The study pertains specifically to field service.

- Only vendor segments of the market were examined.

  - No users were contacted.

D. METHODOLOGY

- The study is based on data generated from a total of 29 interviews from computer and telecommunications firms which provide a reasonable representation of their industries; the respondents are as follows.

  - Fifteen manufacturer responses.

    . Eleven computer manufacturers.

    . Four telecommunications manufacturers.

  - Fourteen merchant responses.

    . Six telecommunications merchant responses.

    . Five computer merchant responses.

    . Three third-party maintenance company responses.

- A total of 10 on-site interviews were made as part of the total of 29 interviews.

  - The remaining 19 interviews were completed by telephone.

- The interviews were made using questionnaires developed by INPUT and AT&T.
  - The manufacturer questionnaire used in the survey is in Appendix A of this report.
  - The merchant questionnaire used in the survey is in Appendix B of this report.
- Selected respondent profiles are in Appendix C; and respondents to the survey, listed by company, title, size, sales, or revenues can be found in Appendix D.
- Respondents were assured of confidentiality.
- AT&T was not identified as the source of this study.

E. DEFINITIONS

- For the purposes of this report, a merchant is engaged in the wholesale purchase and retail sale of goods or services for a profit; merchants in this report include:
  - Telecommunications dealers, distributors, contractors, or agents who provide products as well as services.
  - Computer dealers, distributors, or franchises who provide products as well as services.
  - Third-party maintenance firms who offer services only.
- Inboarding means that a repair shop bills the manufacturer for labor performed.

- Specifically, under inboarding, when warranty service is performed, the repair shop submits a bill for the labor portion of the repair service to the manufacturer. The rate of reimbursement for repair service may be established by the warrantor or may be based on the going rate for the service agency.

- Outboarding means that the repair shop provides labor under warranty.

  - Specifically, under outboarding, the authorized repair shop agrees to perform the labor portion of the warranty service without reimbursement from the manufacturer. In return, the manufacturer generally sells the product to the authorized repair shop at a discounted price.

  - The manufacturers generally require that labor services be covered in the warranty. Any options in the provision of labor services under the warranty are options granted to the repair shop by the manufacturer.

  - A repair shop cannot choose to offer the consumer a less comprehensive warranty together with a reduced product price.

II EXECUTIVE SUMMARY

II EXECUTIVE SUMMARY

A. CONCLUSIONS

1. OPERATIONAL INTERRELATIONSHIPS BETWEEN MANUFACTURERS AND MERCHANTS RELATING TO SERVICE

- Seventy-three (73) percent of all manufacturing respondents in this study use merchants for maintenance support, as is evident in Exhibit II-1.
  - Forty (40) percent of manufacturers use third-party maintenance firms.
    - Forty-five (45) percent of computer manufacturing firms use third-party maintenance.
    - Twenty-five (25) percent of telecommunications manufacturers use third-party maintenance.
  - Thirty-three (33) percent of the manufacturers use more than one type of merchant as defined previously.
- Both telecommunications and computer manufacturers use merchants to support their maintenance functions.

EXHIBIT II-1

MANUFACTURERS' USE OF MERCHANTS TO PROVIDE SERVICE*

MANUFACTURER TYPE*	PERCENT USING MERCHANT SERVICE	PERCENT USING THIRD-PARTY MAINTENANCE	PERCENT USING MULTIPLE MERCHANTS
Computer Manufacturers	73%	45%	36%
Telecommunications Manufacturers	75	25	25
Weighted Average	73%	40%	33%

* BASED ON 11 COMPUTER MANUFACTURING RESPONDENTS AND 4 TELECOMMUNICATIONS MANUFACTURING RESPONDENTS

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- The telecommunications manufacturers, however, use third-party maintenance firms considerably less.

- The revenue potential is not great and maintenance is normally considered to be a marketing tool, not a revenue generator.

- An exception was one respondent who reported usage of third-party maintenance firms which were identified as independent electrical maintenance contractors, now beginning to provide service for PBX, paging, and a variety of telecommunications systems; examples of these firms are:

  . Springfield Electrical and Alarm (Springfield, Massachusetts).

  . Corporate Teleconnect (Perth Amboy, N.J.).

- There are two distinct types of third-party maintenance; the first is appointed in which the manufacturer contracts with the entity to perform service for its customers, and the second is unappointed, competing with the manufacturer for maintenance business.

  - Appointed third-party maintenance agreements are preferred by manufacturers.

  - Reasons for appointing a third-party maintenance firm include: increasing the manufacturer's critical mass of support, coverage in remote areas, stage of manufacturer's growth, and strictly financial and profit motives.

  - Coverage of remote areas, according to the results of this study, has no major significance in use of third-party maintenance firms and is just another one of several considerations outlined above.

- Appointed third-party maintenance firms and telecommunications maintenance firms perform most of their business under formal contract with the manufacturer, as shown in Exhibit II-2.

  - Ninety (90) percent of third-party maintenance and 81% of telecommunications maintenance work are under formal contract with manufacturers.

  - Computer merchants reported a lower percentage of formal contracting which probably indicates the rather independent nature of these merchants.

- Use of merchants to perform maintenance in the fields of computers and/or telecommunications does not depend upon the type of equipment or the channel of sales distribution.

  - This can be seen in Exhibit II-3.

  - Rather, use of merchants depends upon other factors mentioned above such as critical mass, geographic considerations, stage of manufacturer's growth, and financial considerations.

- Manufacturers reported satisfactory experience with the service provided to its customers by merchants.

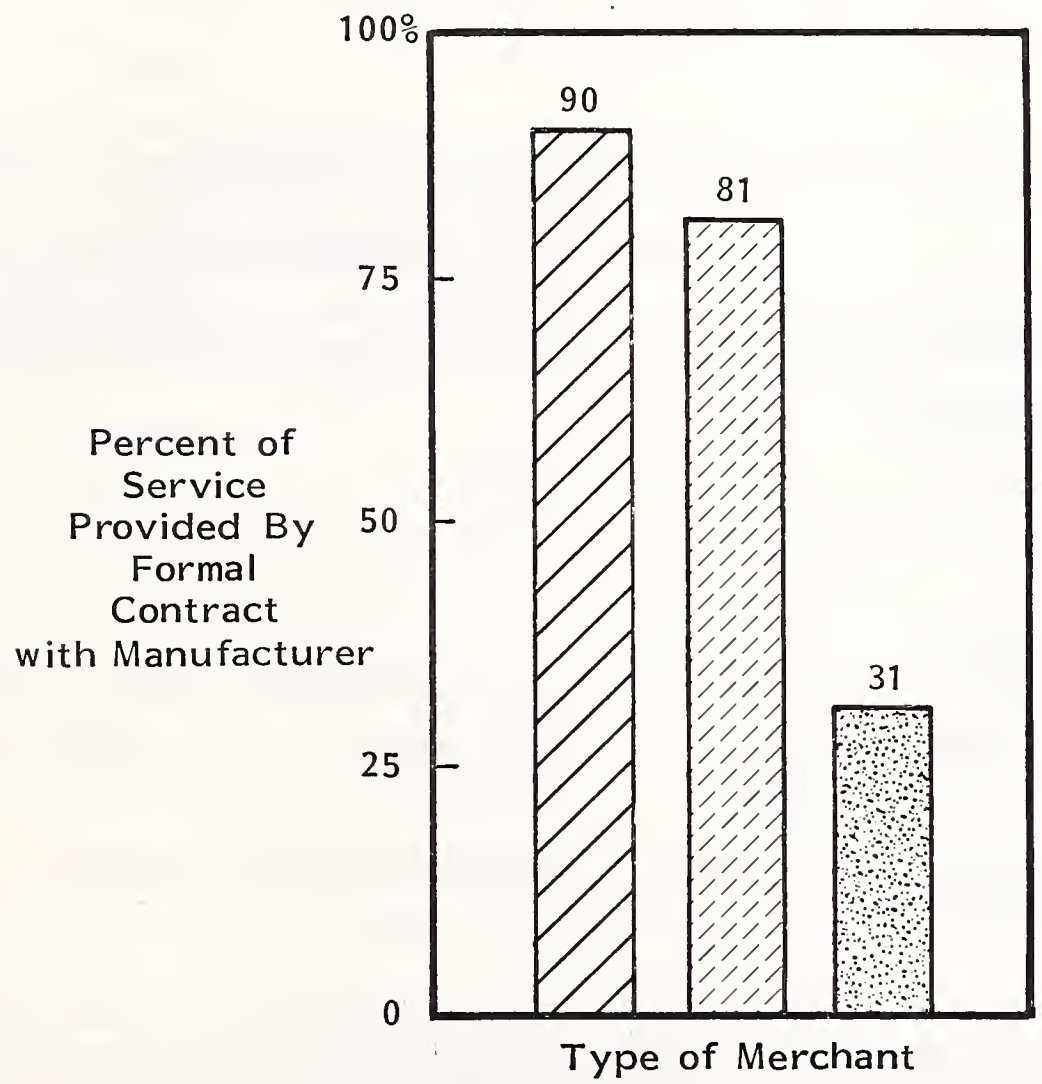
  - Slightly over 50% ranked the service level as satisfactory (3 on a scale of 1 to 5).

  - Slightly less than 50% ranked the service highly and no respondent ranked the service as poor.

  - The median ranking was 3.3 on a scale of 5.

EXHIBIT II-2

EXTENT OF SERVICE BY MERCHANTS BASED ON FORMAL AGREEMENTS WITH MANUFACTURERS*



* BASED ON 6 TELECOMMUNICATIONS, 5 COMPUTER, AND 3 THIRD-PARTY MAINTENANCE RESPONDENTS. THE QUESTION: "ABOUT WHAT PERCENT OF YOUR OVERALL MAINTENANCE OR SERVICE WORK IS PERFORMED AS A RESULT OF FORMAL OR CONTRACTUAL AGREEMENTS WITH MANUFACTURERS?"

EXHIBIT II-3

EFFECT OF SALES CHANNEL AND TYPE OF EQUIPMENT ON WHO PROVIDES SERVICE*

RESPONDENTS†	PERCENT OF RESPONDENTS INDICATING NO EFFECT	
	SALES CHANNEL	TYPE OF EQUIPMENT
Manufacturers		
Computer	73%	100%
Telecommunications	25	75
Merchants		
Computer	100	80
Telecommunications	17	83
Third-Party Maintenance	67	67

* THE QUESTION: "DOES THE WAY IN WHICH EQUIPMENT IS SOLD OR LEASED (SALES CHANNEL) OR THE TYPE OF EQUIPMENT AFFECT WHETHER YOUR FIRM OR ANOTHER PROVIDES WARRANTY AND POST-WARRANTY MAINTENANCE AND SERVICE?"

† BASED ON 29 RESPONDENTS: 11 COMPUTER MANUFACTURERS, 4 TELECOMMUNICATIONS MANUFACTURERS, 5 COMPUTER MERCHANTS, 6 TELECOMMUNICATIONS MERCHANTS, AND 3 THIRD-PARTY MAINTENANCE FIRMS.

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- On the other hand, manufacturers did report some concerns in dealing with merchants.
  - Manufacturers fear that their own reputation or image may be jeopardized.
  - In addition, manufacturers cite loss of control over the merchants' quality, timeliness, and overall performance.
  - Merchants do not share or comprehend this concern in their dealings with manufacturers.
- Merchants see themselves as a benefit to manufacturers and as a direct interface to the end user in:
  - Extending the sales function by providing broader coverage.
  - Doing most of the service work.
- There are some differences in the relationships between telecommunications manufacturers and merchants and computer manufacturers and merchants.
  - Telecommunications merchants service their accounts almost exclusively through an outboarding arrangement with the manufacturer.
  - Computer merchants, on the other hand, employ both inboarding and outboarding agreements.
  - Exhibit II-4 delineates the inboarding and outboarding practices by manufacturers and merchants.
- Other differences, seen in Exhibit II-5, include service provided, performance guarantees, preventive maintenance, and profit potential.

EXHIBIT II-4

INBOARDING VERSUS OUTBOARDING

RESPONDENTS	INBOARDING*	OUTBOARDING†	OTHER‡
Number of Manufacturing Firms:	5 (0/5)§	3 (2/1)	7 (2/5)
Number of Merchants:	2 (0/2)	8 (5/3)	4 (1/3)

* INBOARDING: REPAIR SHOP BILLS BRAND OWNER OR MANUFACURER FOR LABOR PERFORMED

† OUTBOARDING: EQUIPMENT PROVIDED AT A DISCOUNT AND THE REPAIRMAN PROVIDES LABOR UNDER WARRANTY.

‡ OTHER INCLUDES: PAID FOR BY MANUFACTURER, ASSUMED BY MERCHANT IN FULL, MANUFACTURER PROVIDES PARTS - MERCHANT PROVIDES LABOR

§ NUMERATOR IS TELECOMMUNICATIONS AND DENOMINATOR IS COMPUTER

EXHIBIT II-5

SIGNIFICANT SERVICE DIFFERENCES BETWEEN TELECOMMUNICATIONS AND COMPUTER MANUFACTURERS AND MERCHANTS

ITEM	TELECOMMUNICATIONS MANUFACTURING/ MERCHANT	COMPUTER MANUFACTURING/ MERCHANT
Equipment Maintained	PBX/CBX Switches and Stations	Computer Products
Service Provided	• Basic Diagnostics • Repair • Wiring/Moving • System Design • Training	• Basic Diagnostics • Repair
Performance Guarantee	Yes	No
Warranty Terms	12 Months	90 Days
Preventive Maintenance	• Merchant -- 33% • Manufacturer -- 25%	• Merchant -- 0% • Manufacturer -- 80%
Profit Potential	• Merchant -- Good • Manufacturer -- None	• Merchant -- Good • Manufacturer -- Good

- Each is discussed below.

- Computer merchants provide only the very basic services including diagnostics and repair.

  - Telecommunications merchants provide the basic services plus wiring, equipment moving, systems design, and training.

  - Each is provided for a fee and represents revenue and profit opportunities.

- As part of the more complete service, telecommunications merchants offer performance guarantees and a 12-month warranty.

  - Computer merchants, on the other hand, offer no performance guarantees and only a 90-day warranty.

- Thirty-three percent of the telecommunications merchants offer preventive maintenance while no computer merchants offer this service.

  - The computer merchants see preventive maintenance as the responsibility of the computer manufacturer as has historically been the case.

- Finally, all segments of this service industry have experienced good profit potential except the telecommunications manufacturers who see service as an expense and a burden, rather than a potential source of profit.

2. TRENDS

- Manufacturers see an increase in warranty support and a simultaneous decrease in post-warranty support.

  - These trends seem to indicate that there will be more competition for maintenance.

- The trend can be seen in Exhibit II-6.

- Merchants, as seen in Exhibit II-7, see little differences in service trends provided under warranty and post-warranty agreements.

- Third-party maintenance firms reported that they expect a dynamic increase in demand for their service in the next three years.

  - This they attribute to the proliferation of smaller computers and the scarcity of technical resources.

- Section A-3 of this Executive Summary deals with administrative and financial considerations.

3. ADMINISTRATIVE AND FINANCIAL INTERRELATIONSHIPS BETWEEN MANUFACTURERS AND MERCHANTS REGARDING SERVICE

- Manufacturers believe that there are several problems in dealing with merchants for provision of service; the three principal problems are:

  - Cost of implementation and administration.

  - Ease of implementation and administration.

  - Effect on future equipment purchases.

- Merchants, on the other hand, do not view these as significant problems, nor do they believe that manufacturers view them as significant problems.

- One clear indication of the disparity between perceptions of manufacturers and merchants is cost.

  - Each believes that the service they provide is less costly than the other alternative.

EXHIBIT II-6

TRENDS IN MAINTENANCE - MANUFACTURERS*

PERIOD	PERCENT OF SERVICE PROVIDED BY MANUFACTURER	
	WARRANTY	POST-WARRANTY
Now	64%	70%
Three Years Ago	68	53
Three Years From Now	70	63

* BASED ON 15 RESPONDENTS. THE QUESTION: "ABOUT WHAT PERCENT OF YOUR FIRM'S EQUIPMENT IS MAINTAINED AND SERVICED BY YOUR FIRM?"

EXHIBIT II-7

TRENDS IN MAINTENANCE - MERCHANTS*

PERIOD	PERCENT OF SERVICE BY MERCHANTS			
	TELECOMMUNICATIONS MERCHANTS		COMPUTER MERCHANTS	
	WARRANTY	POST-WARRANTY	WARRANTY	POST-WARRANTY
Now	35%	65%	20%	80%
Three Years Ago	44	56	18	82
Three Years From Now	36	64	20	80

* BASED ON 11 RESPONDENTS. THE QUESTION: "ABOUT WHAT PERCENT OF YOUR OVERALL MAINTENANCE OR SERVICE WORK IS WARRANTY AND POST-WARRANTY: NOW, THREE YEARS AGO, AND THREE YEARS FROM NOW?"

- The implication here is that there are different definitions or perceptions of cost.

- Respondents' perceptions of the relationships between manufacturers and merchants can be seen in Exhibit II-8.

- Both manufacturers and merchants believe that control over merchants and monitoring of their performance are difficult and represent problems in this relationship.

  - Forty percent of the manufacturers and 57% of the merchants reported limited or no monitoring and control.

  - Exhibit II-9 illustrates this response.

- A full line of training courses and methodologies is provided by manufacturers for maintenance providers.

  - Included in the training are refresher courses, traveling instruction, hotline services, and manuals.

  - Video media are seldom used at this time.

  - The full extent of training alternatives can be seen in Exhibit II-10.

- Section A-4 of this Executive Summary deals with the nature of the service offered.

4. NATURE OF SERVICE OFFERINGS BY MANUFACTURERS AND MERCHANTS

- Telecommunications manufacturers provide more service functions in their standard offering than do their computer counterparts. The following func-

EXHIBIT II-8

IMPLEMENTATION AND ADMINISTRATION OF
MERCHANT-PROVIDED SERVICE

ISSUE	MANUFACTURERS' RATING*	MERCHANTS PUTTING THEMSELVES IN PLACE OF MANUFACTURERS*
Ease of Implementation and Administration	3.4	2.3
Cost of Implementation and Administration	3.6	2.2
Susceptibility to Abuse and Fraud By Some Firms	2.8	1.8
Quality of Feedback to Manufacturer Relative to Product Performance	2.6	1.6
Effect on Additional Equipment Purchases	3.1	1.5
Impact on Customer Care of Product	2.3	1.4
Unreasonable Price Mark-Ups on Service Agreements By Some Firms	2.1	1.6

* RATING: 1 = LOW OR NO PROBLEM AND 5 = HIGH OR SIGNIFICANT PROBLEM.
BASED ON 9 MANUFACTURER AND 12 MERCHANT RESPONDENTS. THE QUESTION "WHEN OTHER ORGANIZATIONS PROVIDE WARRANTY OR POST-WARRANTY SERVICE, HOW WOULD YOU RATE THE FOLLOWING ON A SCALE OF 1 TO 5?"

EXHIBIT II-9

LACK OF MONITORING AND CONTROL OVER
MERCHANT-PROVIDED SERVICE*

RESPONDENT	RESPONDENTS INDICATING NO MONITORING OR CONTROL
Merchants †	57%
Manufacturers ‡	40%

* THE QUESTION: "HOW DO (YOU-MANUFACTURERS) (MANUFACTURERS-TO MERCHANTS) MONITOR AND CONTROL THE PERFORMANCE OF OTHER PROVIDERS OF SERVICE?"

† 14 RESPONDENTS

‡ 10 RESPONDENTS

EXHIBIT II-10

SERVICE TRAINING AND SUPPORT FOR
MERCHANT-PROVIDED SERVICE*

TRAINING AND SUPPORT	NUMBER OF MANUFACTURERS PROVIDING SUPPORT†	NUMBER OF MERCHANTS RECEIVING SUPPORT FROM MANUFACTURERS‡
Training	11	12
Refresher Classes	6	11
Traveling Instruction	6	8
Hotline	9	14
Manuals	11	14
Videotape	1	0

* THE QUESTION: "WHAT KIND OF TRAINING AND SUPPORT (DO YOU GIVE OTHER PROVIDERS OF MAINTENANCE) (DO MANUFACTURERS PROVIDE TO YOU)?"

† BASED ON 11 RESPONDENTS

‡ BASED ON 14 RESPONDENTS

tions are present in telecommunications service while excluded from computer manufacturers' service offerings:

- Building wiring.
- System design.
- Performance guarantee.
- Equipment moves.
- Training.

- Telecommunications manufacturers rely more heavily on other service providers to carry out service than their computer counterparts and this is reflected in the fact that telecommunications merchants provide more service functions than computer merchants.
  - Wiring, for example, is a separate service function provided by telecommunication manufacturers and is generally subcontracted to merchants at an hourly rate.

- Manufacturers and merchants consider warranty and post-warranty services to be very similar.
  - The terms are limited for the warranty period but the services provided are similar.
  - The warranty and post-warranty terms and conditions are illustrated in Exhibit II-11.

- Merchants tend to carry out warranty and post-warranty service within the terms and conditions prescribed by manufacturers.

EXHIBIT II-11

SUMMARY OF SERVICE VARIATIONS

SERVICE PROVIDER	WARRANTY	POST-WARRANTY
Computer Manufacturers	• 90 days from installation if manufacturer installs • 90 days from shipment if customer installs • End user, on-site; OEM return to factory • 90 days "FOB," 30 days end user • 180 days from shipment (distributer), 90 days for customer	• Contract • Time and materials • Labor only • Parts only • Extended warranty • On-site • Walk in • Mail in • Pick-up and delivery
Telecommunications Manufacturers	• 1 year, parts and labor	• Contract • Time and materials
Computer Merchants	• Same as manufacturer	• Contract, walk-in, Extended warranty • Time and materials
Telecommunications Merchants	• Same as manufacturer	• Contract, walk-in • Time and materials

- Merchants receive parts and labor allowances from manufacturers.

- No charge is made during warranty, but merchants generally have freedom to charge whatever they wish for post-warranty work.

- Warranty service, whether done by manufacturer or merchant, is costed into the equipment; the price of the equipment includes warranty.

- Charges for service differ between computer and telecommunication services but, in each case, the charge is based upon the installed equipment.

  - Computer services are generally 10% to 12% of the hardware price (per year).

  - Telecommunications service is generally charged at $3.00 per line or per instrument (per month).

- Response times vary widely according to the type of contract between the user and the service provider.

  - Emergency service may be a two-hour response guarantee.

  - Computer manufacturers generally guarantee at least a four-hour response.

  - Typically, twenty-four hours is considered acceptable for smaller, less critical equipment.

- The survey found that service strategies and plans are designed to sell hardware; telecommunications manufacturers generally view service as an unprofitable necessity for selling equipment; computer manufacturers concur generally.

  - Telecommunications' service provider's opinion can be stated as follows:

- "We are competing with AT&T who has a large enough company to operate its service at a loss and subsidize that loss through other profit centers. It's tough to compete against that."

- Section A-5 of this Executive Summary deals with customer considerations.

5. CUSTOMER CONSIDERATIONS BASED UPON MANUFACTURERS' AND MERCHANTS' RESPONSES

- Previously in this Executive Summary it was pointed out there is a disparity between the manufacturers and merchants concerning their perceptions of service using a service provider.

  - Issues of implementation, cost, and effect on future sales were discussed.

  - Exhibit II-8 illustrates the divergent responses.

- The study concluded that this disparity of perceptions must be reflected in the customer's perception of service provided by merchants.

- This conclusion was borne out by secondary research.

  - The first commercial user of ROLM's CBX experienced significant problems in dealing with ROLM and its local distributor.

  - The customer was confused about who, the company or the distributor, to approach with questions.

  - The customer also reported that the personal touch had been lost in this relationship.

  - Finally, this user reported that the distributor could get little help from ROLM headquarters.

- The survey also concluded that there are two types of customer who must be dealt with in order to be successful in the service business:

  - The telecommunications customer who is less sophisticated and, as a result, more tolerant of service levels and performance.

  - The data communications customer who is sophisticated and demanding.

- The customer's perception of service may be further complicated by the disparity in the perceived level of service between manufacturers and merchants.

  - According to the survey, merchants believe that there will be an increase in use of third-party maintenance service in the future; manufacturers believe this will decrease.

  - Merchants further believe that they currently provide most of the service functions which must be performed; manufacturers believe that merchants provide only nominal service in the overall industry.

- Service providers, either manufacturers or merchants, should be aware of these diverse views held by the main participants in the service industry.

B. RECOMMENDATIONS

- The survey indicated some major communications problems, as seen in the ROLM case study, and some problems of monitoring and control between manufacturers and merchants.

  - These problems are addressed below, with INPUT's recommendations for resolving them.

- INPUT recommends a centralized telephone dispatch center to receive and process all end users' and merchants' requests for service or service advice.

  - A walk-in depot could also be used as the vehicle for processing service orders centrally.

  - The center (or depot) would be staffed with dispatchers who would record the problem, the equipment, and the location.

  - The dispatcher would contact the designated maintenance provider for corrective action and follow-up.

  - This "hot-line" service, which would be provided for both end users and merchants, would eliminate the confusion reported in the ROLM case.

- INPUT recommends, further, that the service function should be a national umbrella network which has service capabilities at each point of sale.

- INPUT recommends that the service function, including diagnostic and repair service, should include at least four customer options to meet a variety of service requirements and customer needs; the options are:

  - Walk-in stores or depots to provide a service in which customers bring an inoperable unit or system in and leave it "over the counter" for repair.

  - Mail or ship-in locations to offer the end user an option to send the inoperable unit or system in for repair.

  - Pick-up and delivery to offer the customer portal to portal service where a service representative, either from the manufacturer or the merchant, responds to the trouble call by traveling to the site.

- An exchange program option to provide a chargeable alternative to accelerate repair or replacement.

- INPUT recommends that AT&T develop a service plan for merchants which would be simple and brief and include the following:

  - Normal turnaround or response time of 24 hours; options for quicker response should be included at an increased price.

  - The principal period of maintenance to be between 8:00 a.m. to 6:00 p.m. Mondays through Fridays excluding holidays; options should be available for other periods.

  - User self-maintenance as a viable option should be offered; a package, including documentation, service tips, an initial spare parts kit with replenishment provisions and instructions, is marketable.

- INPUT recommends a reevaluation of the warranty period and an increase over the existing 12-month limitation.

  - This would increase the product credibility, provide a distinct competitive advantage, and become a major marketing strategy.

- INPUT, then, recommends that maintenance service be used in sales promotion, as is becoming increasingly popular with recent marketers of consumer products:

  - "Order now, get three months' free maintenance. Save on the cost of ownership for a limited time only." (Printer Store)

  - "Can the system be repaired while it is processing by a nontechnical person?" (Stratus Computer)

  - "We expanded the sales incentive plan to include free scheduled maintenance." (Chrysler)

III SURVEY RESULTS

III SURVEY RESULTS

A. BUSINESS RELATIONSHIPS

1. WHO PROVIDES SERVICE, HOW, AND HOW WELL

- Merchants are comprised of dealers, distributors, contractors, franchises, and third-party maintenance firms.
  - The predominant business forms are dealers and distributors.
  - Franchises make up only 13% of the total class of merchants.
  - Contractors, another form of merchant, are infrequently used as sources of maintenance.
- Telecommunications merchants generally declared that all business, including customer contact point, company assigned to perform work, and submission of invoices was conducted through them and not the manufacturers.
  - The third-party maintenance firms, on the other hand, indicated that most business was conducted in the name of the manufacturer.
  - Telecommunications manufacturers agreed that the business contact, work performance, and billing were handled by other service providers.

- Computer manufacturers were mixed, five stating that business was conducted through them solely, two through merchants, and two stating that business was represented by both manufacturer and merchant. These relationships did not vary between warranty and post-warranty.

- Manufacturers' satisfaction with other service providers was generally "medium" to "good." An average grade of "medium" applied to distributors and contractors; "medium" to "good" applied to dealers and third-party maintenance firms, while there was little or no experience with franchises.

2. EFFECT OF SALES CHANNEL AND TYPE OF EQUIPMENT ON SERVICE

- Computer manufacturers and computer merchants generally indicated that the type of sales or distribution channel did not affect whether the service was done by merchants or manufacturers. Most respondents indicated that dealers and distributors were responsible for service. Only one computer manufacturer dictated factory service; others reluctantly "allowed" others to provide service.

- Telecommunications manufacturers and merchants service what they sell. Merchants will also service equipment included in their product line regardless if sold by another channel including the manufacturer.

- Merchants did not see sales channels affecting service.

- All manufacturing respondents indicated that the type of equipment did not affect the source of service. Several manufacturers had different service plans for different products.

- Computer and telecommunications merchants stated that the type of equipment did not influence who provided service; however, the same type of equipment, personal computers for example, could have different service plans for each manufacturer.

- Third-party maintenance firms viewed a large opportunity for third-party service as smaller equipment proliferates.

3. CHARACTERISTICS OF MANUFACTURER/MERCHANT AFFILIATIONS

- Computer manufacturers generally do not support franchises, contractors, or agents.

  - Reluctantly they support third-party maintenance organizations; they do support third parties where they have been specifically engaged or appointed.

  - Mainly they support authorized dealers and distributors.

- Telecommunications manufacturers generally support merchants who provide service.

- Manufacturers perceived a variety of problems associated with merchants' service:

  - Lack of trained personnel and parts.

  - High cost of third-party service.

  - Confusion as to whom the end user calls.

  - Territorial conflicts and overlap.

  - Warranty claims control.

  - Lack of performance tracking.

- Merchants thought there were fewer problems, but that some did exist, including:

- More support from manufacturers, technical and general.

- Improved communication.

- High cost of repair, replacement, and handling.

- Third-party maintenance firms cited problems concerning lack of parts, training, documentation, and support, as well as lateness of accounts receivable.

- Manufacturers do not seek a direct confrontation with other providers of service to recapture service business, except when the service has been poor and may affect future business.

- Ten out of eleven merchant respondents stated that manufacturers do not recapture service accounts once the service has been specifically assigned to the merchant.

  - Instead, the reverse seems to be true as at least two merchants claimed they have captured maintenance accounts from manufacturers.

- Third-party maintenance firms concurred that manufacturers rarely recapture maintenance business and if they do it's because the manufacturers' service revenue/density has reached the point where maintenance can be performed by them.

- Manufacturer respondents described the major advantage of using other services as being broader coverage, as well as:

  - Cost effectiveness in low-density or remote areas.

  - Potentially faster response.

  - More representation.

  - Service associated with point of sale.

- Merchants perceived the major advantage as cost savings to the manufacturer, as well as:
  - More personalized contracts.
  - Remote sites.
  - Single point of contact.
  - Off-loading management and financial strain while a manufacturer is in a rapid growth period.
- Manufacturers viewed the major disadvantages of others providing services as lack of control, plus:
  - Potential confusion.
  - Other allegiances.
  - Bad image.
- Merchants generally felt that there are no disadvantages to their service.
- Manufacturers had mixed ideas about trends:
  - Proliferation of smaller computers will result in more third-party maintenance.
  - Sales and service go together.
  - More quality control is required.
- Trends indicated by merchants included:
  - Maintenance needs will increase and more service providers will arise.

- More third-party service is required because of proliferation of low-cost equipment.

- More third-party service is needed because dealers would rather sell than service.

- End users will be more service conscious.

- Depot services and messenger replacement are becoming trends.

- At least one manufacturer now offers a month to a year warranty (free service). This could be a trend "to differentiate products and let dealers concentrate on sales."

B. OPERATIONS

1. WHO SERVICES WHICH TYPES OF EQUIPMENT

- The 15 manufacturing respondents represented a comprehensive equipment service base:

  - Eight serviced terminals.

  - Six serviced personal computers.

  - Six serviced PBX/CBX switches.

  - Five serviced minicomputers.

  - Five serviced word processors.

- Five serviced small business computers.
- Four serviced PBX/CBX stations.

- The 14 merchant respondents represented three segments:
  - Six were telecommunications firms.
  - Five were computer dealers.
  - Three were third-party maintenance firms.
- The 14 merchant respondents maintained the following equipment:
  - Seven serviced terminals.
  - Six serviced PBX/CBX switches and stations.
  - Four serviced small business systems.
  - Four serviced personal computers.
  - Four serviced word processors.
  - Two serviced minicomputers.
- Seven merchant respondents maintained other equipment, including:
  - Key systems.
  - SL-1.
  - TIE.

- WATS.
- AT-I.
- Microcomputers.

- PBX/CBX switches and stations maintained by telecommunications merchants include:
  - Northern Telecom.
  - Siemans.
  - OKI.
  - NEC.
  - ITT.
  - Mitel.
  - ROLM.
  - FOCUS.
  - Toshiba.

- There was no distinction between warranty and post-warranty as to type of equipment maintained.

2. SERVICE FUNCTIONS PERFORMED UNDER WARRANTY AND POST-WARRANTY

- Exhibits III-1 and III-2 summarize functions performed. There was no distinction between warranty and post-warranty with respect to functions performed.

- Telecommunications manufacturers' standard service offerings comprise more functions than their computer counterparts.

  - Three out of four telecommunications manufacturers provide building wiring as a standard function; only one out of eleven computer manufacturers provides wiring as a standard function. The remaining telecommunications respondent offers building wiring as an option.

  - Three out of four telecommunications manufacturers provide system design as a standard functional service offering.

  - Two out of four telecommunications manufacturers provide a performance guarantee as a standard service function.

  - Two out of four telecommunications manufacturers provide equipment moves as a standard function.

  - Training is more of a standard offering for telecommunications manufacturers than it is for computer manufacturers.

  - Telecommunications manufacturers rely more heavily on other service providers than do computer manufacturers.

- Telecommunications merchants provide more functions in standard service than computer merchants, reflecting the increased number of functions that telecommunications manufacturers provide.

EXHIBIT III-1

SERVICE FUNCTIONS PERFORMED AS INDICATED BY MANUFACTURERS*

FUNCTION	NUMBER OF RESPONDENTS				
				WHO PERFORMS?	
	STANDARD	OPTIONAL	NOT PERFORMED	MANU-FACTURER	OTHER PROVIDER
Diagnosis	14 (4/10)†	1 (0/1)†	0 (0/0)†	13 (2/11)†	8 (3/5)†
Testing with a remote support facility	11 (4/7)	2 (0/2)	2 (0/2)	10 (2/8)	3 (2/1)
Board replacement	14 (4/10)	0 (0/0)	1 (0/1)	12 (3/9)	6 (3/3)
Unit replacement (swap out)	9 (3/6)	3 (0/3)	3 (1/2)	10 (1/9)	5 (2/3)
Supply of spare parts	9 (4/5)	1 (0/1)	5 (0/5)	8 (2/6)	2 (2/0)
Taking device to a maintenance depot	9 (3/6)	4 (0/4)	2 (1/1)	10 (2/8)	4 (2/2)
On-site service	13 (4/9)	1 (0/1)	1 (0/1)	11 (2/9)	5 (3/2)
Installation	11 (4/7)	3 (0/3)	1 (0/1)	10 (1/9)	6 (3/3)
Building wiring	4 (3/1)	1 (1/0)	10 (0/10)	3 (2/1)	3 (3/0)
User training	9 (4/5)	3 (0/3)	3 (0/3)	10 (3/7)	2 (2/0)
Equipment moves	4 (2/2)	7 (2/5)	4 (0/4)	9 (2/7)	5 (3/2)
Performance guarantee‡	2 (2/0)	7 (2/5)	6 (0/6)	7 (2/5)	4 (3/1)
System design/ consultation	5 (3/2)	3 (0/3)	7 (0/7)	6 (1/5)	3 (2/1)

*BASED ON 15 MANUFACTURING RESPONDENTS, 11 OF WHOM WERE COMPUTER AND 4 OF WHOM WERE TELECOMMUNICATIONS

†NUMERATOR IS TELECOMMUNICATIONS MANUFACTURERS; DENOMINATOR IS COMPUTER MANUFACTURERS

‡MOST PERFORMANCE GUARANTEES ARE FOR GOVERNMENT

INP
YAT

EXHIBIT III-2

SERVICE FUNCTIONS PERFORMED AS INDICATED BY MERCHANTS*
(FRACTION EXCLUDES THIRD-PARTY MAINTENANCE FIRMS)

FUNCTION	NUMBER OF RESPONDENTS				
				WHO PERFORMS?	
	STANDARD	OPTIONAL	NOT PERFORMED	MANU-FACTURER	YOUR FIRM
Diagnosis	14 (6/5)†	–	–	–	14 (6/5)†
Testing with a remote support facility	10 (5/4)	–	4 (1/3)†	–	10 (5/4)
Board replacement	14 (6/5)	–	–	–	14 (6/5)
Unit replacement (swap out)	13 (6/5)	1	–	–	14 (6/5)
Supply of spare parts	11 (6/5)	–	3	–	11 (6/5)
Taking device to a maintenance depot	10 (5/5)	–	4 (1/3)	–	11 (5/5)
On-site service	14 (6/5)	–	–	1 (0/1)†	13 (6/4)
Installation	12 (6/4)	–	2 (0/2)	–	12 (6/4)
Building wiring	4 (3/1)	5 (2/2)†	5 (1/2)	–	8 (4/3)
User training	11 (6/5)	2	1	1 (0/1)	13 (6/5)
Equipment moves	2 (1/1)	11 (5/3)	1 (0/1)	–	12 (6/4)
Performance guarantee ‡	1 (1/0)	5 (4/0)	8 (1/5)	–	7 (5/2)
System design/ consultation	9 (5/4)	2 (1/1)	3	–	11 (6/5

* BASED ON 14 MERCHANT RESPONDENTS, 6 OF WHOM ARE TELECOMMUNICATIONS MERCHANTS, 5 OF WHOM ARE COMPUTER MERCHANTS, AND 3 OF WHOM ARE THIRD-PARTY FIRMS

† NUMERATOR IS TELECOMMUNICATIONS MERCHANTS; DENOMINATOR IS COMPUTER MERCHANTS

‡ MOST PERFORMANCE GUARANTEES ARE FOR GOVERNMENT.

- Respondents providing software support included:
  - Eleven manufacturers, or 73% of the total.
  - Eight merchants, or 73% of the total.
  - No third-party maintenance firms.
- Respondents that do not provide software support stated:
  - "Handled under a separate contract."
  - "Sold as is."
  - "Manufacturer provides."
- Most manufacturers stated that their service was not related to geography or remote areas. Fifty-three percent of manufacturing respondents did not employ other service providers in remote areas.
  - Remoteness, as discussed before, is only one of several issues determining the use of service providers.

C. CONTRACTUAL TERMS AND CONDITIONS

1. CONTRACT ANALYSIS SUMMARY FROM ACTUAL CONTRACTS RECEIVED

- Contracts received as a result of the survey are summarized in the indicated exhibits which are self-explanatory and require no further comment.
  - Services provided (Exhibit III-3).

EXHIBIT III-3

MANUFACTURER AND MERCHANT SERVICE PROVISIONS

FIRMS	BASIC SERVICE
	On-Site
Star Datacom (1), Wang, CDC (2), NT, TI (3), DEC (4)	Labor and materials for unscheduled remedial maintenance
	Pick Up and Delivery
TI, Xerox (5), IBM (6)	Repair or replace
	Customer Carry-In (Depot)
TI, Xerox, IBM, DEC	Repair or replace
	Mail-In
DEC, IBM	Repair or replace
	Time and Materials
All firms	Labor and materials at actual cost/value
	Labor only
CDC, Star Datacom	Labor billed separately/regularly. Parts billed as needed
	Parts only
CDC	Parts billed separately/regularly. Labor billed as needed

(1) Star has a separate agreement for NEC equipment including labor, materials, add-ons, moves, and changes. All other equipment service includes labor and parts.

(2) CDC Basic Services include PM and Downtime Credit; another option for subsystems and terminals.

(3) TI includes PM but not software.

(4) DEC also provides PM under DEC Service Agreement "if required," FCO installation at no cost and remote diagnosis for "eligible" equipment.

(5) Xerox has a loaner option at a premium. Pickup within 15 miles of Xerox office.

(6) Extended warranty option only; also has to be within 30 miles of service center.

- Response times (Exhibit III-4).
- User requirements (Exhibit III-5).
- User restrictions (Exhibit III-6).
- Liability (Exhibit III-7).

- The analysis is based on contracts received from:
  - IBM.
  - DEC.
  - TI.
  - Wang.
  - Indeserv.
  - Xerox.
  - Northern Telecom.
  - CDC.
  - Star Datacom.

2. SELECTED TERMS AND CONDITIONS FROM RESPONDENTS

- The extent of repair or replacement, as indicated by respondents, is as follows:

EXHIBIT III-4

MANUFACTURER AND MERCHANT PUBLISHED RESPONSE TIMES*

Two hours: CDC Basic Service excluding travel time and Northern Telecom emergency service when problem "materially" interferes with normal conduct of buyer's business.

Four Hours: Star Datacom emergency service (problems affecting major systems), DEC Service and OEM Agreements when within 100 miles of DEC office.

Eight hours: DEC Service and OEM agreements when between 101 and 200 miles of DEC office.

Sixteen hours: DEC Service and OEM agreements when over 200 miles from DEC office.

Twenty-four hours: Northern Telecom will be dispatched within 24 hours (routine service). IBM (replacement).

Forty-eight hours: DEC Carry-In service (two working days after receipt of equipment).

Five working days: DEC Mailer.

No guarantee: Xerox.

* BASED ON PUBLISHED INFORMATION

EXHIBIT III-5

MANUFACTURER AND MERCHANT USER REQUIREMENTS

REQUIREMENT	FIRM STIPULATING REQUIREMENT								
	WANG	IBM	CDC	XEROX	TI	NT	DEC	STAR	INDESERV
Full Access to Equipment	X		X		X		X	X	
Workspace and Storage			X		X		X	X	
Proper Environment	X		X		X		X	X	
Letter to Telephone Company Stating Interconnect Agency								X	
Operate Equipment Within Published Specifications	X								
Housekeeping, Supplies			X				X		
Manufacturer Supplies Training, Backup, Parts and Documentation									X
Provide for Maintenance Aids			X				X		
Call Toll-Free Number and Provide Results of Diagnostics		X							
Proper Shipping Container		X					X		
Issue Purchase Order Prior to Carry in and Mailer Service							X		
No Apparent User Requirements				X		X			

EXHIBIT III-6

MANUFACTURER AND MERCHANT USER RESTRICTIONS

RESTRICTION	FIRM STIPULATING RESTRICTION								
	WANG	IBM	CDC	XEROX	TI	NT	DEC	STAR	INDESERV
Inspection Prior to Maintenance	X	X	X		X	X	X	X	
Maintenance by Firm Only			X*		X	X		X	
Some Service Plan for all Equipment in System			X						
No Modifications, Alterations, or Attachments	X		X		X	X	X	X	
Non-Transferrable (Without Permission)	X	X		X	X	X	X		X
Equipment Use: Eight Hours, Five Days									X
Proprietary Rights			X			X			
Reconditioning at User Expense	X		X		X				
Moving Equipment	X						X		
IBM Self-Maintenance Requires Purchase of Advanced Service Aids and Attendance at Service School		X							

* BASIC PLAN ONLY

EXHIBIT III-7

MANUFACTURER AND MERCHANT LIABILITY LIMITATIONS

LIMITATION	FIRM STIPULATING LIMITATION								
	WANG	IBM	CDC	XEROX	TI	NT	DEC	STAR	INDESERV
Not Liable for Indirect Special, Incidental, or Consequential Damages	X	X*	X	X	X	X	X	X	X
Maximum Liability									
• To Repair or Replace		X	X	X	X	X			
• One Year of Charges	X								
• $100,000							X		
Exclusions									
• Misuse	X		X	X		X	X	X	
• Abuse						X		X	
• Accident	X							X	
• Negligence	X		X	X				X	
• Theft								X	
• Vandalism								X	
• Unexplained Loss								X	
• Improper Environment	X		X	X		X	X	X	
• Improper Connection								X	
• Improper Wiring								X	
• Improper Repair or Installation					X	X	X	X	
• Improper Use						X			
• Retrofits				X					
• Relocation	X			X					
• Incompatible Equipment	X					X			
• Alterations or Attachments	X			X	X	X	X	X	
• Unsafe Conditions	X								
• Force Majeure				X		X			
• Union Caused Problems					X				
• Fire, Flood, Storm			X					X	

* STATEMENT THAT SOME STATES DON'T ALLOW EXCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES AND THEREFORE MAY NOT APPLY

- Only one manufacturing respondent provided major components or parts. The rest of the respondents provided both major and minor components or parts.

- All merchants provided both major and minor components or parts.

- Four out of 15 manufacturing respondents stated that preventive maintenance was included in their service offering.

- Two out of six telecommunications respondents stated that preventive maintenance was included.

- Preventive maintenance was not included by computer dealers.

- Two manufacturers reported that externally caused damages (such as vandalism, fire, flood) were covered. Thirteen did not include externally caused damages.

- None of the manufacturers included externally caused damages.

- Of the manufacturing respondents, six said that customer faults (such as operator error, ignorance) were not included, while four stated that customer faults were covered; five respondents did not know.

- All six telecommunications merchants stated that customer faults were covered.

- Four out of five computer dealer respondents stated that customer problems were not covered while one said that they were covered.

- There was no significant difference between warranty and post-warranty agreements in terms of services offered.

- Eight out of eleven computer manufacturers had a 90-day warranty. Others ranged from 30 days to two years.

- Most telecommunications manufacturers had one-year warranties.

- Eight out of fourteen merchants offered a warranty of one year. The remainder varied from 30 days to two years. All respondents' post-warranty service contracts were for one year.

D. ADMINISTRATIVE AND FINANCIAL ISSUES

1. IMPLEMENTATION AND ADMINISTRATION OF MERCHANT SERVICE

- Thirteen out of 15 manufacturing respondents said they handled warranty administration while two respondents said others did the administration.

- Ten out of 14 merchant respondents said they handled warranty administration; two stated they did it together with the manufacturer and two stated the manufacturer did it alone.

- Twelve manufacturing respondents indicated they signed and administered post-warranty contracts. Three manufacturers delegated this to merchants.

- All merchant respondents stated that they sign and administer their own service contracts.

2. COSTS AND PRICING PATTERNS RELATING TO SERVICE

- A majority of manufacturing respondents thought their service was less expensive than merchants'.

  - This was contradicted by merchants.

- Eleven out of 12 merchant respondents thought it was cheaper for them to service than the manufacturer, especially in remote locations.

- Manufacturers vary in how they compensate merchants for post-warranty service work. Most either do not compensate merchants or do so by flat fee. Merchants generally stated that parts are furnished by manufacturer for the first year, after which they are provided at cost or a discount.

- Only four respondents out of twenty-nine provided estimated distribution of labor costs. Averages from the four answers were:

-	Wages	53%
-	Fringe Benefits	23
-	Overhead	16
-	Supplies	8
		100%

- Only five respondents out of twenty-nine offered per call comparisons between their staff and others:

  - The range of per call costs was $95 to $240.

3. MONITORING AND CONTROL OF OTHER SERVICE PROVIDERS

- Manufacturers said that field service was generally responsible for monitoring and controlling other service providers.

  - Two firms suggested that consultants help monitor and control.

- Merchants claimed that there was virtually no monitoring and control of their service by the manufacturer.

- There is no suggested pricing for warranty service. Prices for post-warranty work are usually established using manufacturers' rates as a basis. Merchants normally provide time and materials rates and their hourly labor rates are less than those of the manufacturer. Time related increases in service prices are the exception although prices are reviewed on a regular basis.

APPENDIX A: MANUFACTURER INTERVIEW QUESTIONNAIRE

4. What is your level of satisfaction with other organizations providing maintenance and service for your equipment, using a scale of 1 to 5 (1=low, 3=medium, 5=high)

ORGANIZATION TYPE	SATISFACTION		COMMENTS
	WARRANTY	POST WARRANTY	
Franchise			
Dealer			
Distributor			
Third Party Maintenance Organization			
Contractors			
Agents			
Other (Specify)			

5. With what specific firms do you have agreements to provide service or maintenance on your equipment?

COMPANY NAME	ORGANIZATION TYPE (SEE QUES. #4)	CITY	STATE

6. Does the way in which equipment is sold or leased (sales channel) affect whether warranty and post warranty maintenance and service is provided by the manufacturer or by another firm? (Read list of "sale types" below; get full details on differences.) YES ( ) NO ( ) If YES, explain below.

	WHO PROVIDES TYPE OF SERVICE				
	WARRANTY		POST-WARRANTY		
SALE TYPES	MANU-FACTURER	OTHER PROVIDER	MANU-FACTURER	OTHER PROVIDER	COMMENTS
Company salesman					
Nat'l account sale					
Company retail store					
Independent computer dealer					
Other retail outlet					
Distributor					
Third party maintenance firm					
Other (Describe)					

CATALOG NO. YAT2[ ][ ][ ]

MANUFACTURER'S QUESTIONNAIRE

INPUT is conducting a study on the extent to which manufacturers supply their own maintenance and service to their sold or leased equipment as opposed to having it supplied by others. We will send you a summary of the study when it is completed.

The information you provide will be confidential and your firm's identity will not be disclosed in our report.

1. Does your company manufacture any of the following types of equipment?

TYPE	YES	NO
Minicomputers	( )	( )
Small business computers	( )	( )
Personal computers	( )	( )
Word processors	( )	( )
Terminals	( )	( )
PBX/CBX switches	( )	( )
PBX/CBX stations	( )	( )

(If respondent replies "NO" to all equipment types, thank them and terminate the interview.)

2. About what percentage of your firm's equipment is maintained and serviced by your firm?

	WARRANTY (IN PERCENT)	POST WARRANTY (IN PERCENT)
Now?		
Three years ago?		
Three years from now?		

3. What types of other organizations that provide service or maintenance to your firm's equipment does your firm support?

ORGANIZATION TYPE	PROVIDES WARRANTY		PROVIDES POST-WARRANTY		MANUFACTURER SUPPORTS	
	YES	NO	YES	NO	YES	NO
Franchise (e.g., Radio Shack)						
Dealer (e.g., computer stores)						
Distributor (e.g., Heath or Hamilton Avnet)						
Third party maintenance organization (e.g., Sorbus or TRW)						
Contractors (define & give example)						
Agent (define & give example)						
Other (specify)						

7. Does the <u>type</u> of equipment affect whether your firm or another supplies warranty and post-warranty maintenance and service? (Give examples from "equipment type" below.)

	TYPE OF SERVICE				
	WARRANTY		POST-WARRANTY		
EQUIPMENT TYPE	MANU-FACTURER	OTHER PROVIDER	MANU-FACTURER	OTHER PROVIDER	COMMENTS
Minicomputers					
Small business computers					
Personal computers					
Word Processors					
Terminals					
CRT's					
Teleprinter					
Disks					
Printers					
PBX/CBX					
Switches					
Stations					
Other (Describe)					

8. How many warranty programs does your firm have, what are they and which is the predominant one?

_____

_____

_____

_____

_____

_____

Next I would like to discuss the coverage under these different warranties.

(NOTE TO INTERVIEWER: As you complete the sections in Question #8, the respondent may offer to send you a contract and price list instead of answering the question. Your still need to ask 8b, 8c, 8m, 8n, 8o, 8q, and 8r.)

INTERVIEWER: Complete 8a-8r for each warranty alternative.

8a. Warranty alternative: _____

8b. What equipment types are covered under this warranty?

EQUIPMENT TYPE

Minicomputers	( )
Small business computers	( )
Personal computers	( )
Word processors	( )
Terminals	( )
PBX/CBX switches	( )
PBX/CBX stations	( )
Other (Specify _____	( )

8c. What percentage of equipment covered by this warranty is leased, rented, or sold?

Leased	_____%
Rented	_____%
Sold	_____%

8d. What component repair and/or replacement is provided?

( ) Major components or parts only.
( ) Major and minor components or parts.
( ) Other (Specify _____)

8e. Are externally caused damages covered (e.g., vandalism, fire, flood)?

( ) NO
( ) YES Specify _____
_____
_____
_____

8f. Is preventive maintenance included:

( ) YES ( ) NO

( ) Other _____

8g. Does coverage include problems caused by the customer (i.e., faulty operation, ignorance, etc.)

( ) YES ( ) NO

( ) Other _____

8h. What incidental and consequential damages are covered?

Inclusions _____

_____

Exclusions (Liability limitations) _____

_____

8i. What are the terms and conditions regarding costs to the manufacturer?

( ) Parts and labor.

( ) Parts only.

( ) Shipping

( ) Other _____

8j. What, if any, contractual requirements are placed on the user?

_____

_____

_____

_____

8k. What, if any, contractual restrictions are placed on the user?

_____

_____

_____

_____

8L. What is the warranty duration? _____

8m. Who handles warranty administration?

( ) Manufacturer (your firm).
( ) Other organization.

8n. How would you characterize your relationship with other organizations for the provision of warranty service?

( ) Inboarding (see definition below)
( ) Outboarding (see definition below)
( ) Other (Specify) _____

Inboarding: Repair shop bills brand owner or manufacturer for labor performed.

Specifically, under inboarding, when warranty service is performed, the repair shop submits a bill for the labor portion of the repair service to the brand owner. The rate of reimbursement for repair service may be established by the warrantor or may be based on the going rate for the service agency.

Outboarding: Equipment provided at discount, and repairman provides labor under warranty.

Specifically, under outboarding, the dealer or authorized repairman agrees to perform the labor portion of the warranty service without reimbursement from the brand owner. In return, the brand owner generally sells the product to the dealer or authorized repairman at a discounted price. The brand owners generally require that labor services be covered in the warranty. Any options in the provision of labor services under the warranty are options granted to the dealer by the brand owner. A dealer cannot choose to offer the consumer a less comprehensive warranty together with a reduced product price.

80. Functions performed under warranty and who performs them:

	Standard	Optional	Not Performed	Who Performs? Mfr.	Who Performs? Other Provider
Diagnosis	( )	( )	( )	( )	( )
Testing with a remote support facility	( )	( )	( )	( )	( )
Board replacement	( )	( )	( )	( )	( )
Unit replacement (swap out)	( )	( )	( )	( )	( )
Supply of spare parts	( )	( )	( )	( )	( )
Taking device to a maintenance depot	( )	( )	( )	( )	( )
On-site service	( )	( )	( )	( )	( )
Installation	( )	( )	( )	( )	( )
Building wiring	( )	( )	( )	( )	( )
User training	( )	( )	( )	( )	( )
Equipment moves	( )	( )	( )	( )	( )
Performance Guarantee (specify) _____	( )	( )	( )	( )	( )
System design/consultation	( )	( )	( )	( )	( )
Other (specify) _____ _____	( )	( )	( )	( )	( )

INFOTRON

8p. How much do you charge for this warranty? _____
(Request a price list)

8q. Does your firm recommend a"suggested price?"

( ) YES ( ) NO

8r. Are there time-related increases in price? (e.g., After five years, the price increases a certain amount.)

( ) NO
( ) YES Specify _____
_____
_____

9. How many post-warranty alternatives does your firm offer, and what are they?

_____

_____

_____

_____

_____

_____

Next I would like to discuss the coverage under these different alternatives.

(NOTE TO INTERVIEWER: As you complete the sections in Question #9, the respondent may offer to send you a contract and price list instead of answering the question. You still need to ask 9b, 9c, 9m, 9n, 9p, and 9q.)

INTERVIEWER: Complete 9a-9q for each post-warranty alternative.

9a. Post-warranty alternative: _____

9b. What equipment types are covered under this alternative?

EQUIPMENT TYPE

Minicomputers	( )
Small business computers	( )
Personal computers	( )
Word processors	( )
Terminals	( )
PBX/CBX switches	( )
PBX/CBX stations	( )
Other (specify _____)	( )

9c. What percentage of equipment covered by this alternative is leased, rented, or sold?

Leased	_____%
Rented	_____%
Sold	_____%

9d. What component repair and/or replacement is provided?

( ) Major components or parts only.
( ) Major and minor components or parts.
( ) Other (Specify _____)

9e. Are externally caused damages covered (e.g., vandalism, fire, flood)?

( ) NO
( ) YES Specify _____
_____
_____

9f. Is preventive maintenance included:

( ) YES ( ) NO

( ) Other _____

9g. Does coverage include problems caused by the customer (i.e., faulty operation, ignorance, etc.)

( ) YES ( ) NO

( ) Other _____

9h. What incidental and consequential damages are covered?

Inclusions _____

_____

Exclusions (Liability limitations) _____

_____

9i. What are the terms and conditions regarding costs to the manufacturer?

( ) Parts and labor.

( ) Parts only.

( ) Other (Specify) _____

9j. What, if any, contractual requirements are placed on the user?

_____

_____

_____

_____

INF

9k. What, if any, contractual restrictions are placed on the user?

_____

_____

_____

_____

9L. What is the contract duration? _____

9m. Who signs the post-warranty alternative as the warrantor (e.g., who signs contract) and who administers it?

	SIGNS	ADMINSTERS
You (manufacturer)	( )	( )
Franchise	( )	( )
Dealer	( )	( )
Distributor	( )	( )
Third party	( )	( )
Contractor	( )	( )
Agent	( )	( )
Other (Specify)_____	( )	( )

9n. Functions performed under post-warranty and who performs them:

				Who Performs?	
	Standard	Optional	Not Performed	Mfr.	Other Provider
Diagnosis	( )	( )	( )	( )	( )
Testing with a remote support facility	( )	( )	( )	( )	( )
Board replacement	( )	( )	( )	( )	( )
Unit replacement (swap out)	( )	( )	( )	( )	( )
Supply of spare parts	( )	( )	( )	( )	( )
Taking device to a maintenance depot	( )	( )	( )	( )	( )
On-site service	( )	( )	( )	( )	( )
Installation	( )	( )	( )	( )	( )
Building wiring	( )	( )	( )	( )	( )
User training	( )	( )	( )	( )	( )
Equipment moves	( )	( )	( )	( )	( )
Performance Guarantee (specify) _____	( )	( )	( )	( )	( )
System design/consultation	( )	( )	( )	( )	( )
Other special features (specify)					
_____					
_____	( )	( )	( )	( )	( )

9o. How much do you charge for this alternative? _____
(Request price list)

9p. Does your firm recommend a "suggested price?"

( ) YES ( ) NO

9q. Are there time related increases in price? (e.g., After five years, the price increases a certain amount.)

( ) NO
( ) YES Specify _____
_____
_____

10a. Where have you found that special attention must be paid to defining the relationships between your firm and other providers of maintenance or service (i.e., what sort of problems have you had)?

_____

_____

_____

_____

10b. Do you find that more special attention is needed concerning:

a. Warranty procedures? (How?) _____

_____

_____

_____

b. Post-warranty procedures? (How?) _____

_____

_____

c. If more than one other provider of services? _____

_____

_____

_____

11. When your firm agrees to have another organization provide maintenance or service:

	YOUR FIRM	OTHER ORGANIZATION
Who does the customer contact for service?	( )	( )
Under whose name is the work performed?	( )	( )
Under whose name is the service bill submitted?	( )	( )

11a How does this vary between warranty and post-warranty alternatives?

_____

_____

_____

_____

_____

11b. How are other firms compensated for providing service or maintenance? (e.g., flat fee, per occurrence).

_____

_____

_____

_____

12. Do warranty and post-warranty activities include hardware and operating systems software?

( ) YES ( ) NO

If no, how is software handled? _____

_____

_____

If yes, describe any differences in support _____

_____

_____

13. Does the extent of your reliance on other providers of maintenance vary depending on:

a. The geographic region involved?

( ) YES ( ) NO

Explain _____

_____

_____

b. Increase in remote or non-urban areas?

( ) YES ( ) NO

Explain _____

_____

_____

c. In what remote areas do you use other organizations to provide service, and who do you use?

AREA	OTHER FIRM USED

14. What conditions cause your firm to convert customers from other service providers to service from your own firm?

( ) Increased concentration of equipment.
( ) Poor quality of service.
( ) Costs.
( ) Other. (Explain)

_____

_____

_____

INF

15. How do you convert a geographic area or group of customers from another maintenance provider to your own (mainfacturer) maintenance?

16. What kind of training and support do you give to other providers of maintenance? (Describe.)

- Formal training
- Refresher classes
- Travelling instructors
- Hotline
- Training manuals
- Other (Describe.)

17. How do you monitor and control the performance of the other providers of maintenance in regard to:

- Quality of workmanship _____
- Response time _____
- Time to repair _____
- Customer charges _____
- Other (Specify) _____

18. Who in your firm handles this monitoring/control?

19. Does this vary according to whether it is warranty or non-warranty work?

( ) YES ( ) NO If yes, please describe differences.

Warranty _____

Non-Warranty _____

INP

20. How would you compare the cost to your firm of using your own staff to provide maintenance as opposed to using another source?

- Generally _____

  _____

  _____

- In terms of dollars per service call.

  Your staff $_____ per service call

  Using other provider $_____ per service call

- How would you estimate the distribution of labor costs for your services staff?

  _____% Wages _____% Other overhead

  _____% Fringe benefits _____% Supplies

21. When other organizations provide warranty or post-warranty service, how would you rate the following on a scale of 1 to 5. (1=Low, 3=Medium 5=High)

_____ Ease of implementation and administration.
_____ Cost of implementation and administration.
_____ Susceptibility to abuse and fraud.
_____ Quality of feedback relative to product performance.
_____ Effect on additional equipment purchases.
_____ Impact on customer care of product.
_____ Unreasonable price mark-ups on service agreements.

22. What advantages and disadvantages do you see in using other providers to supply maintenance services for your equipment?

Advantages _____

_____

_____

Disadvantages _____

_____

_____

23. What trends do you see favoring or discouraging manufacturers like yourself in using more maintenance services from other providers?

_____

_____

_____

_____

24. Would you send me a copy of the:

Terms and conditions of your warranty and post-warranty agreements with other providers of maintenance?

( ) YES ( ) NO

Terms and conditions of service agreements between other firms and users of your equipment?

( ) YES ( ) NO ( ) DON'T EXIST

25. Approximately what were your maintenance revenues in 1981?

$_____ million

INP

APPENDIX B: NON-AFFILIATE INTERVIEW QUESTIONNAIRE

CATALOG NO. YAT2[ ][ ][ ]

NON-AFFILIATED ORGANIZATION QUESTIONNAIRE

INPUT is conducting a study on the extent to which data processing and communications manufacturers support maintenance and service of their equipment through other firms. We will send you a summary of the study when it is completed.

The information you provide will be confidential and your firm's identity will not be disclosed in our report.

1. Which of the following classifications would fit your firm?

( ) Dealer
( ) Distributor
( ) Third party maintenance organization
( ) Franchise
( ) Contractor Describe _____
_____
( ) Agent Describe _____
_____
( ) Other Describe _____

1a. Does your company provide maintenance and service for any of the following types of equipment?

TYPE	YES	NO	IF YES, MANUFACTURER
Minicomputers	( )	( )	_____
Small business computers	( )	( )	_____
Personal computers	( )	( )	_____
Word processors	( )	( )	_____
Terminals	( )	( )	_____
PBX/CBX switches	( )	( )	_____
PBX/CBX stations	( )	( )	_____
Other (Specify) _____	( )	( )	_____

(If respondent replies "NO" to all equipment types, thank them and terminate interview.)

2. About what percentage of your overall maintenance or service work is performed as a result of formal or contractual agreements with manufacturers?

_____%

- Approximately what portion of this is warranty and post-warranty?

_____% Warranty
_____% Post-warranty

Have these figures changed much in the past 3 years?

_____

_____

What do you think they will be in three years?

	THREE YEARS AGO	NOW	THREE YEARS FROM NOW
Warranty	_____%	_____%	_____%
Post-Warranty	_____%	_____%	_____%
	100%	100%	100%

INF

3. Have you found that the way in which equipment is sold or leased (sales channels) affects whether service is provided by the manufacturer or by another firm? (Read list of "sale types" below.)

	TYPE OF SERVICE				
	WARRANTY		POST-WARRANTY		
SALE TYPES	MANU-FACTURER	OTHER PROVIDER	MANU-FACTURER	OTHER PROVIDER	COMMENTS
Company salesman					
Nat'l account sale					
Company retail store					
Independent computer dealer					
Other retail outlet					
Distributor					
Third party maintenance firm					
Other (Describe)					

3a. Does this vary by manufacturer?

( ) YES ( ) NO

If yes, please describe how specific manufacturers' policies differ.

MANUFACTURER	DIFFERENCES

INP

4. In your experience does the <u>type</u> of equipment affect whether the manufacturer or some other organization provides warranty and post-warranty service? (Give examples from "equipment type" below.)

	TYPE OF SERVICE				
	WARRANTY		POST-WARRANTY		
EQUIPMENT TYPE	MANU-FACTURER	OTHER PROVIDER	MANU-FACTURER	OTHER PROVIDER	COMMENTS
Minicomputers					
Small business computers					
Personal computers					
Word Processors					
Terminals					
CRT's					
Teleprinter					
Disks					
Printers					
PBX/CBX					
Switches					
Stations					
Other (Describe)					

4a. Does this vary by manufacturer?

( ) YES ( ) NO

If yes, please describe variations.

MANUFACTURER	DIFFERENCES

5. Does your firm provide warranty service, and if so, for which manufacturers?

_____

_____

_____

_____

_____

_____

Next I would like to discuss the coverage under these different warranties.

(NOTE TO INTERVIEWER: As you complete the sections in Question #5, the respondent may offer to send you a contract and price list instead of answering the question. You still need to ask 5a, 5b, 5c, 5d, 5n, 5o, 5p, 5r, and 5s.)

5a. Manufacturer: _____

5b. Warranty alternative: _____

5c. What equipment types are covered under this warranty?

EQUIPMENT TYPE

Minicomputers	( )
Small business computers	( )
Personal computers	( )
Word processors	( )
Terminals	( )
PBX/CBX switches	( )
PBX/CBX stations	( )

5d. What percentage of equipment covered by this warranty is leased, rented, or sold?

Leased	_____%
Rented	_____%
Sold	_____%

5e. What component repair and/or replacement is provided?

( ) Major components or parts only.
( ) Major and minor components or parts only.
( ) Other (Specify _____)

5f. Are externally caused damages covered (e.g., vandalism, fire, flood)?

( ) NO
( ) YES Specify _____
_____
_____
_____
_____

5g. Is preventive maintenance included:

( ) YES ( ) NO
( ) Other _____

5h. Does coverage include problems caused by the customer (i.e., faulty operation, ignorance, etc.)

( ) YES ( ) NO
( ) Other _____

5i. What incidental and consequential damages are covered?

Inclusions _____

_____

Exclusions (Liability limitations) _____

_____

5j. What are the terms and conditions regarding costs to the manufacturer?

( ) Parts and labor.
( ) Parts only.
( ) Other _____

5k. What, if any, contractual requirements are placed on the user?

_____

_____

_____

_____

5l. What, if any, contractual restrictions are placed on the user?

_____

_____

_____

_____

5m. What is the warranty duration? _____

5n. Who handles warranty administration?

( ) Manufacturer.
( ) Your firm.
( ) Other (Specify) _____

5o. How would you characterize your relationship with the manufacturer for the provision of warranty service?

( ) Inboarding (see definition below)
( ) Outboarding (see definition below)
( ) Other (Specify) _____

Inboarding: Repair shop bills brand owner or manufacturer for labor performed.

Specifically, under inboarding, when warranty service is performed, the repair shop submits a bill for the labor portion of the repair service to the brand owner. The rate of reimbursement for repair service may be established by the warrantor or may be based on the going rate for the service agency.

Outboarding: Equipment provided at discount, and repairman provides labor under warranty.

Specifically, under outboarding, the dealer or authorized repairman agrees to perform the labor portion of the warranty service without reimbursement from the brand owner. In return, the brand owner generally sells the product to the dealer or authorized repairman at a discounted price. The brand owners generally require that labor services be covered in the warranty. Any options in the provision of labor services under the warranty are options granted to the dealer by the brand owner. A dealer cannot choose to offer the consumer a less comprehensive warranty together with a reduced product price.

INP

5p. Functions performed under warranty and who performs them:

	Standard	Optional	Not Performed	Who Performs? Mfr.	Who Performs? Your Firm
Diagnosis	( )	( )	( )	( )	( )
Testing with a remote support facility	( )	( )	( )	( )	( )
Board replacement	( )	( )	( )	( )	( )
Unit replacement (swap out)	( )	( )	( )	( )	( )
Supply of spare parts	( )	( )	( )	( )	( )
Taking device to a maintenance depot	( )	( )	( )	( )	( )
On-site service	( )	( )	( )	( )	( )
Installation	( )	( )	( )	( )	( )
Building wiring	( )	( )	( )	( )	( )
User training	( )	( )	( )	( )	( )
Equipment moves	( )	( )	( )	( )	( )
Performance Guarantee (specify) _____	( )	( )	( )	( )	( )
System design/consultation	( )	( )	( )	( )	( )
Other (specify) _____ _____	( )	( )	( )	( )	( )

5q. How much do you charge for this warranty? _____
(Request a price list)

5r. Does the manufacturer recommend a "suggested price?"

( ) YES ( ) NO

5s. Are there time related increases in price? (e.g., After five years, the price increases a certain amount.)

( ) NO
( ) YES Specify _____
_____
_____

6. Does your firm provide post-warranty service, and if so, for which manufacturers?

_____

_____

_____

_____

_____

_____

Next I would like to discuss the coverage under these different post-warranty arrangements.

(NOTE TO INTERVIEWER: As you complete the sections in Question #6, the respondent may offer to send you a contract and price list instead of answering the question. You still need to ask 6a, 6b, 6c, 6d, 6n, 6o, 6p, 6r, and 6s.)

6a. Manufacturer: _____

6b. Post-warranty alternative: _____

6c. What equipment types are covered under this alternative?

EQUIPMENT TYPE

Minicomputers	( )
Small business computers	( )
Personal computers	( )
Word processors	( )
Terminals	( )
PBX/CBX switches	( )
PBX/CBX stations	( )

6d. What percentage of equipment covered by this alternative is leased, rented, or sold?

Leased	_____%
Rented	_____%
Sold	_____%

6e. What component repair and/or replacement is provided?

( ) Major components or parts only.
( ) Major and minor components or parts only.
( ) Other (Specify _____)

6f. Are externally caused damages covered (e.g., vandalism, fire, flood)?

( ) NO
( ) YES Specify _____
_____
_____
_____

INP

6g. Is preventive maintenance included:

( ) YES ( ) NO
( ) Other _____

6h. Does coverage include problems caused by the customer (i.e., faulty operation, ignorance, etc.)

( ) YES ( ) NO
( ) Other _____

6i. What incidental and consequential damages are covered?

Inclusions _____

_____

Exclusions (Liability limitations) _____

_____

6j. What are the terms and conditions regarding costs to the manufacturer?

( ) Parts and labor.
( ) Parts only.
( ) Other _____

6k. What, if any, contractual requirements are placed on the user?

_____

_____

_____

_____

6l. What, if any, contractual restrictions are placed on the user?

_____

_____

_____

_____

6m. What is the contract duration? _____

6n. How would you describe your role as a provider of this post-warranty service?

( ) Independent service agency with an agreement between yourself and customer (no formal relationship between you and manufacturer or merchandiser)

( ) Service agency affiliated with manufacturer or merchandise (customers agreement is with manufacturer or merchandiser)

( ) You yourself are the dealer (or merchandiser) and have an agreement with the customer for post warranty service.

( ) Other. Explain _____

6o. Who signs the post-warranty alternative as the warrantor (e.g., who signs contract) and who administers it?

	SIGNS	ADMINISTERS
Your firm	( )	( )
Manufacturer (Specify)		
_____	( )	( )
_____	( )	( )
_____	( )	( )
_____	( )	( )
_____	( )	( )
_____	( )	( )
_____	( )	( )

INF

6p. Functions performed under post-warranty agreement and who performs them:

	Standard	Optional	Not Performed	Who Performs? Mfr.	Who Performs? Your Firm
Diagnosis	( )	( )	( )	( )	( )
Testing with a remote support facility	( )	( )	( )	( )	( )
Board replacement	( )	( )	( )	( )	( )
Unit replacement (swap out)	( )	( )	( )	( )	( )
Supply of spare parts	( )	( )	( )	( )	( )
Taking device to a maintenance depot	( )	( )	( )	( )	( )
On-site service	( )	( )	( )	( )	( )
Installation	( )	( )	( )	( )	( )
Building wiring	( )	( )	( )	( )	( )
User training	( )	( )	( )	( )	( )
Equipment moves	( )	( )	( )	( )	( )
Performance Guarantee (specify) _____	( )	( )	( )	( )	( )
System design/consultation	( )	( )	( )	( )	( )
Other (specify) _____ _____	( )	( )	( )	( )	( )

6q. How much do you charge for this post-warranty alternative? _____
(Request price list)

6r. Does the manufacturer recommend a "suggested price?"

( ) YES ( ) NO

6s. Are there time related increases in price? (e.g., After five years, the price increases a certain amount.)

( ) NO
( ) YES Specify _____
_____
_____

INP

7. Where have you found that special attention must be paid to defining the relationships between your firm and the manufacturer? (i.e., what sort of problems have you had.)

_____

_____

_____

_____

8. Do you find that more special attention is needed concerning:

a. Warranty procedures? (How?) _____

_____

_____

_____

b. Post-warranty procedures? (How?) _____

_____

_____

_____

9. When you provide maintenance under an agreement with manufacturers: (if more than one, answer question #9 for each manufacturer)

9a. Manufacturer _____

	YOUR FIRM	MANUFACTURER
Who does the customer contact initially?	( )	( )
Under whose name is the work performed?	( )	( )
Under whose name is the bill submitted?	( )	( )

9b. How does this vary between warranty and post-warranty work?

MANUFACTURER	WARRANTY	POST-WARRANTY

INP

9c. How are you compensated for the service you provide under agreements with manufacturers? (e.g., flat fee, per occurrence)

MANUFACTURER	HOW COMPENSATED?

10. Do warranty and post-warranty activities include hardware and operating system software? (Answer for each manufacturer.)

Manufacturer: _____

( ) YES ( ) NO

If no, how is software handled? _____

_____

_____

If yes, describe any differences in support _____

_____

_____

11. What are the arrangements under which a manufacturer converts maintenance customers from being your account to theirs?

_____

_____

_____

_____

_____

12. What kind of training and support do manufacturers provide to you? (Describe) If it varies by manufacturer, fill out separate pages.

Manufacturer: _____

- Formal training _____
- Refresher classes _____
- Travelling instructors _____
- Hotline _____
- Training manuals _____
- Other (Describe.) _____

13. How do manufacturers monitor and control the performance of your firm's maintanance activities in the following areas? (If respondent has experience with several manufacturers, list for each.)

Manufacturer _____

- Quality of workmanship _____
- Response time _____
- Time to repair _____
- Customer charges _____
- Other _____
- Does this vary according to whether it is warranty or post-warranty work?

( ) YES ( ) NO If yes, please describe the differences.

Warranty _____

Post-Warranty _____

INP

CATALOG NO. [redacted]

14. Organizationally, who in the manufacturing company monitors or handles warranty and post-warranty activities you perform?

MANUFACTURER	COMPANY CONTACT

15. Are any of the following costs absorbed by manufacturers with which you have service agreements?

	YES	NO	IF YES, MANUFACTURER(S)
Wages	( )	( )	_____
			_____
Fringe benefits	( )	( )	_____
			_____
Other overhead	( )	( )	_____
			_____
Supplies	( )	( )	_____
			_____

16. How would you compare the cost to the manufacturer of using your staff to provide maintenance as opposed to using its own staff?

- Generally _____

  _____

  _____

- In terms of dollars per service call.

  Your staff $_____ per service call

  Manufacturers staff $_____ per service call

17. To answer this question, put yourself in the place of the manufacturer. Based on your experience, rate the following problems on a scale of 1 to 5. (1=Low; 3=Medium; 5=High)

_____ Ease of implementation and administration for the manufacturer.
_____ Cost of implementation and administration to the manufacturer.
_____ Susceptibility to abuse and fraud by some firms.
_____ Quality of feedback to the manufacturer relative to product performance.
_____ Effect on additional equipment purchases.
_____ Impact on customer care of product.
_____ Unreasonable price mark-ups on service agreements by some firms.

18. Do you offer any warranty or post-warranty alternatives that are not supported by the manufacturer (Support being training or some structured program)?

( ) NO
( ) YES Specify manufacturers and request literature.

_____

_____

_____

_____

16. How would you compare the cost to the manufacturer of using your staff to provide maintenance as opposed to using its own staff?

- Generally _____

  _____

  _____

- In terms of dollars per service call.

  Your staff $_____ per service call

  Manufacturers staff $_____ per service call

17. To answer this question, put yourself in the place of the manufacturer. Based on your experience, rate the following problems on a scale of 1 to 5. (1=Low; 3=Medium; 5=High)

_____ Ease of implementation and administration for the manufacturer.
_____ Cost of implementation and administration to the manufacturer.
_____ Susceptibility to abuse and fraud by some firms.
_____ Quality of feedback to the manufacturer relative to product performance.
_____ Effect on additional equipment purchases.
_____ Impact on customer care of product.
_____ Unreasonable price mark-ups on service agreements by some firms.

18. Do you offer any warranty or post-warranty alternatives that are not supported by the manufacturer (Support being training or some structured program)?

( ) NO
( ) YES Specify manufacturers and request literature.

_____

_____

_____

_____

APPENDIX C: SELECTED RESPONDENT PROFILES

APPENDIX C: SELECTED RESPONDENT PROFILES

A. COMPUTER MANUFACTURER

- This very large manufacturer has been in the personal computer business for less than one year. Sales and service channels include in-house and two major dealers. One of the dealers sells and services a wide assortment of items for the home including clothing, appliances, hardware, furniture, and dry goods. There will soon be 45 of these stores selling and servicing the manufacturers' product. The other dealer is a chain of about 200 computer stores selling personal computers, electronic games, software, and assorted documentation to the computer hobbyist, and of late - the businessman.

- The strategy is to keep the service as simple as possible with the least amount of handling. The basic services are repair and replacement through pick-up and delivery or mail-in. Another strategy is to make the end user troubleshoot via a complete system diagnostic program that isolates a fault to the assembly within the unit.

- This corporation strongly believes in providing service at the point of sale, and supports every individual dealership by providing full service training for two people. Parts are provided at wholesale prices and labor is provided at 70% of list price. Open competition for the service business exists between the manufacturer and dealer. To discourage the user in attempting his own maintenance, an authorized training course and service kit are prerequisites.

- The manufacturer feels that his relationships with dealers are good.

B. A TELECOMMUNICATIONS MANUFACTURER

- This well known telecommunications manufacturer has subsidiaries that service 70% of the installed base while independent distributors handle the remaining service requirements. Distributors and subsidiaries market the manufacturer's products to end users.

- A one-year warranty is provided to the merchants and they are free to offer any type of service they wish. Eighty-five percent of equipment maintained by merchants is leased. The manufacturer's costs for warranty repair are built into the equipment prices and merchants are charged only for out-shipping. Pulling wire is subcontracted out by distributors and the charge for this ranges between $5 and $6 per hour. Turnaround time for replacing defective units is two days.

- Post-warranty service consists of allowing the merchant a fixed unit price for replacement.

- The manufacturer views service as a necessity to sell and not as a profitable enterprise, "We are competing with AT&T who has a large enough company to operate its service at a loss and subsidize that loss through other profit centers. It's tough to compete against that."

- This firm rates its satisfaction with merchants providing service as average.

C. A COMPUTER STORE

- This computer store is one of 179 domestic stores and of 15 in Canada and

overseas. The first store opened in 1976. Two principles of the company are that the stores represent a variety of products and manufacturers and that they address multiple markets. Although stores in the chain are free to adapt to local market conditions all have access to a product line of nearly 3,000 products from roughly 80 manufacturers.

- Warranty programs range, by manufacturers, from 90 to 360 days. Most expense for repair during warranty is borne by the manufacturer. Charges by the store to the end user may be assessed depending on the option selected. One such plan includes instruction and three months' free maintenance for $150. Post-warranty service is provided predominantly on a time and materials basis with prices being at what the market will bear, and the manufacturer in turn charges set rates to the store. The service man comes in only "a couple of nights a week."

- The store is experiencing less than a 5% failure rate on equipment it installs.

- No significant problems with manufacturers were cited.

- The respondent stated that the marketplace for personal computers is like the automobile market in the thirties.

D. A THIRD-PARTY MAINTENANCE FIRM

- This third-party maintenance firm generates $3 million in annual revenues with between 15 and 20 full-time employees and numerous technicians throughout the country who work part time or on a retainer. The company does not perform service itself. It provides a brokerage arrangement bringing available technicians to companies (subscribers) that need maintenance help.

- The company deals with the subscriber in behalf of the local independent service technician and handles billing and administration in his behalf.

Compensation for this is a percentage of the total contract. Technicians are provided training on-site at subscribers' facilities and are sent back to the field with a kit of spare parts. The subscriber has to provide backup in the event the problem cannot be solved. There are currently about 100 subscribers.

- Relationships with subscribers are often a problem since many of them use the firm in question as a buffer until they can build up their own staffs.

APPENDIX D: RESPONDENTS TO THE SURVEY

EXHIBIT D-1

RESPONDENTS

Manufacturers (15)

Datapoint*
Digital Equipment Corporation*
Control Data Corporation
Northern Telecom*
Xerox*
IBM*
ITT
Lear Siegler
NEC
Hewlett-Packard
Executone
Mitel
Tandy
ROLM*
Texas Instruments*

Telecommunications Dealers (6)

Henkels McCoy (Star Datacom)*
Audio Equipment
Jarvis Corporation
Fisk Telephone
Satellite Communications
Communications Corporation

Computer Dealers (5)

Computerland*
Atlanta Minicomputer
Q1
Micromart
Trendata

Third-Party Maintenance Firms (3)

Indeserv*
Dow Jones
TRW

* ON-SITE INTERVIEWS

EXHIBIT D-2

RESPONDENTS BY TITLE

Manufacturers

Service Manager
Services Administrator
Staff - Service Marketing
Manager, Marketing Analysis
Contracts Administrator
Consumer Information Manager
V.P. of Field Operations
Consultant
Administrative Field Operations Manager
Product Marketing Manager
Manager of Contract Support
Manager of Customer Service

Third-Party Maintenance Firms

Director of Planning and Development
National Field Service Manager
Director of Sales and Founder

Stores

Branch Manager
Customer Engineer Manager
Salesman

Telecommunications Merchants

Vice President
V.P. of Operations
Two Operations Managers

Dealers

Sales and Technical Support Manager
President
Manager of Administration
Manager of Business Review and Administration
Northeast Regional Manager
Operations Manager

EXHIBIT D-3

RESPONDENTS' SIZE BY TOTAL REVENUE, MAINTENANCE REVENUE, OR PERSONNEL

RESPONDENT	RANGES*		
	TOTAL REVENUE	MAINTENANCE REVENUE	EMPLOYEES
Manufacturers	$75 Million to Over $3 Billion	$350 Million to $813 Million	200 to 50,000
Telecommunications Merchants	$3 Million to $55 Million	Not Available	100 to 800
Computer Merchants	$295 Million	$3 Million to $7 Million	Not Available
Third-Party Maintenance Firms	$3 Million to $150 Million	$3 Million to $150 Million	15 to 2,800

* RANGES SHOWN ARE BASED ON RESPONDENTS WHO ANSWERED QUESTIONS REGARDING SIZE AND REVENUES. MANY RESPONDENTS DECLINED TO PROVIDE THIS INFORMATION.

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